

WHAT IS CLAIMED IS:

1. An electric drive unit, comprising:
  - a drive unit casing;
  - an electric motor;
  - a feed oil passage, which supplies a working oil for cooling and lubrication to respective mechanisms of the drive unit including the electric motor, the electric motor and the feed oil passage both provided in the drive unit casing; and
  - an oil reservoir, which is provided in an upper area of the drive unit casing, the oil reservoir comprising:
    - a first reservoir in communication with a first discharge oil passage as well as a supply source of the working oil;
    - a second reservoir in communication with a second discharge oil passage; and
    - a weir between the first reservoir and the second reservoir.
2. The electric drive unit according to claim 1, wherein the first discharge oil passage is opened above a coil of the electric motor through a first orifice, and the second discharge oil passage is communicated to an in-shaft oil passage of the electric motor leading to the respective mechanisms.
3. The electric drive unit according to claim 2, wherein the second discharge oil passage comprises a second orifice having a larger opening area than that of the first orifice.
4. The electric drive unit according to claim 3, wherein the weir comprises an opening providing communication between the first reservoir and the second reservoir to guarantee supply of the working oil to the in-shaft oil passage of the electric motor.
5. The electric drive unit according to claim 4, wherein the opening is composed of a first opening having a larger opening area than that of the first orifice and a second opening having a larger opening area than that of the first opening, the second opening being arranged above the first opening when mounted on a vehicle.
6. The electric drive unit according to claim 5, wherein an opening of the first discharge oil passage in the first reservoir is arranged below a second opening of the weir when mounted on a vehicle.
7. The electric drive unit according to claim 6, wherein the opening of the first discharge oil passage in the first reservoir is arranged above the first opening of the weir.

8. The electric drive unit according to claim 3, wherein the opening area of the second orifice is set on the basis of viscosity of the working oil in a cold state and pressure resistance of the oil reservoir.

9. The electric drive unit according to claim 4, wherein the opening area of the second orifice is set on the basis of viscosity of the working oil in a cold state and pressure resistance of the oil reservoir.

10. The electric drive unit according to claim 2, wherein the weir comprises an opening providing communication between the first reservoir and the second reservoir to guarantee supply of the working oil to the in-shaft oil passage of the electric motor.

11. The electric drive unit according to claim 10, wherein the opening is composed of a first opening having a larger opening area than that of the first orifice and a second opening having a larger opening area than that of the first opening, the second opening being arranged above the first opening when mounted on a vehicle.

12. The electric drive unit according to claim 11, wherein an opening of the first discharge oil passage in the first reservoir is arranged below a second opening of the weir when mounted on a vehicle.

13. The electric drive unit according to claim 12, wherein the opening of the first discharge oil passage in the first reservoir is arranged above the first opening of the weir.

14. The electric drive unit according to claim 10, wherein the opening area of the second orifice is set on the basis of viscosity of the working oil in a cold state and pressure resistance of the oil reservoir.

15. The electric drive unit according to claim 1, wherein the oil reservoir contacts with a cooling medium flow passage with a heat transfer wall therebetween.